

IN THE CLAIMS:

1. - 10. (Canceled)

11. (Previously Presented) A dye-sensitized solar cell comprising a transparent substrate, a transparent electrically-conductive membrane formed on the surface of the transparent substrate, an electrically-conductive substrate disposed opposed to the transparent electrically-conductive membrane, a porous semiconductor layer having a dye adsorbed thereto and an electrolyte interposed between said transparent electrically-conductive membrane and said electrically-conductive substrate, said electrolyte comprising a molten salt incorporated in a network structure; wherein the network structure is formed by reacting at least one compound A having at least two isocyanate groups with at least one compound B having at least two amino groups, with the proviso that, if compound A has two isocyanate groups, compound B has at least three amino groups.

12. (Previous Presented) The dye-sensitized solar cell of Claim 11, wherein at least one of said Compound A and said Compound B comprises a polymer structure having a molecular weight of from 500 to 100,000.

13. (Previously Presented) The dye-sensitized solar cell of Claim 12, wherein a part or whole of the polymer structure of said Compound A and said Compound B comprises one or more selected from the group consisting of polyether, polyester, polycaprolactone, polysiloxane, polyolefin, polybutadiene, polyisoprene, polycarbonate and polyphosphazene.

14. (Previously Presented) The dye-sensitized solar cell of any one of Claims 11 to 13, wherein said network structure comprises a crosslinked structure obtained

by reactions including at least a reaction of the isocyanate group in said Compound A and the amino group in said Compound B.

15. (Previously Presented) The dye-sensitized solar cell of any one of Claims 11 to 13, wherein said network structure comprises a crosslinked structure obtained by the reaction of the Compound A having an isocyanate group and the Compound B having an amino group under heating.

16. (Previously Presented) The dye-sensitized solar cell of any one of Claims 11 to 13, wherein said electrolyte is formed by mixing at least one kind of said Compound A having isocyanate group, at least one kind of said Compound B having amino group and a molten salt comprising an oxidation-reduction pair, and then allowing the mixture to react.

17. (Previously Presented) The dye-sensitized solar cell of Claim 16 ~~17~~, wherein said electrolyte comprises a crosslinked structure obtained by heating said mixture.

18. (Previously Presented) A dye-sensitized solar cell comprising a transparent substrate, a transparent electrically-conductive membrane formed on the surface of the transparent substrate, an electrically-conductive substrate disposed opposed to the transparent electrically-conductive membrane, a porous semiconductor layer having a dye adsorbed thereto and an electrolyte interposed between said transparent electrically-conductive membrane and said electrically-conductive substrate, said electrolyte comprising a molten salt incorporated in a network structure obtained by crosslinking at least one kind of Compound A having one or more isocyanate groups per molecule with at least one kind of Compound C having two or more carboxyl groups and/or hydroxyl groups per

molecule, said Compound C comprising a polymer structure having a molecular weight of from 500 to 100,000 and a part or whole of the polymer structure comprising one or more selected from the group consisting of polyether, polyester, polycaprolactone, polysiloxane, polyvinylpyrrolidone, polycarbonate and polyphosphazene,

with the proviso that, if the number of isocyanate groups in A is two, the number of carboxyl groups, or the number of hydroxyl groups, or the number of hydroxyl and carboxyl groups combined in compound C is at least three.

19. (Previously Presented) The dye-sensitized solar cell of Claim 18, wherein only said Compound A of said Compound A and said Compound C has a polymer structure having a molecular weight of from 500 to 100,000.

20. (Previously Presented) The dye-sensitized solar cell of Claim 18 or 19, wherein said network structure comprises a crosslinked structure obtained by reactions including at least a reaction of the isocyanate group in said Compound A and the carboxyl group and/or hydroxyl group in said Compound C.

21. (Previously Presented) The dye-sensitized solar cell of either of Claims 18 or 19, wherein said network structure comprises a crosslinked structure obtained by the reaction of said Compound A having an isocyanate group and said Compound C having a carboxyl group and/or hydroxyl group under heating.

22. (Previously Presented) The dye-sensitized solar cell of Claim 18 or 19, wherein said electrolyte is formed by mixing said Compound A having at least one isocyanate group, said Compound C having at least one carboxyl group and/or hydroxyl group and a molten salt comprising an oxidation-reduction pair, and then allowing the mixture to react.

23. (Previously Presented) The dye-sensitized solar cell of Claim 22, wherein said electrolyte comprises a crosslinked structure obtained by heating said mixture.

24. (Previously Presented) The dye-sensitized solar cell of any one of Claims 11 to 13, wherein said molten salt comprises a salt having a melting point of lower than room temperature and/or a salt which is liquid at room temperature.

25. (Previously Presented) The dye-sensitized solar cell of any one of Claims 11 to 13, wherein said molten salt takes part in the production of an oxidation-reduction pair.

26. (Previously Presented) The dye-sensitized solar cell of any one of Claims 11 to 13, wherein said molten salt has a cationic structure containing quaternary nitrogen and/or tertiary sulfur.

27. (Previously Presented) The dye-sensitized solar cell of Claim 26, wherein said molten salt has one or more selected from the group consisting of ammonium, sulfonium, heterocyclic compound and derivatives thereof as cation.

28. (Previously Presented) The dye-sensitized solar cell of Claim 27, wherein said heterocyclic compound is pyridinium, imidazolium, piperidinium or pyrazolium.

29. (Previously Presented) The dye-sensitized solar cell of any one of Claims 11 to 13, wherein said molten salt has an iodide ion as anion.

30. (Previously Presented) The dye-sensitized solar cell of any one of Claims 11 to 13, wherein said porous semiconductor layer has a specific surface area of from 10 to 200 m²/g.

31. (Previously Presented) The dye-sensitized solar cell of claim 11 wherein compound A is selected from the group consisting of:

tolylene diisocyanate, diphenylmethane diisocyanate, naphthalene diisocyanate, xylylene diisocyanate, hexamethylene diisocyanate, trimethylhexamethylene diisocyanate, isophorone diisocyanate, cyclohexyl diisocyanate, an adduct of a lower molecule alcohol and a isocyanate selected from the group consisting of tolylene diisocyanate, diphenylmethane diisocyanate, naphthalene diisocyanate, xylylene diisocyanate, hexamethylene diisocyanate, trimethylhexamethylene diisocyanate, isophorone diisocyanate, cyclohexyl diisocyanate, and a prepolymer formed by an addition reaction of a compound having a polymer structure and an isocyanate selected from the group consisting of tolylene diisocyanate, diphenylmethane diisocyanate, naphthalene diisocyanate, xylylene diisocyanate, hexamethylene diisocyanate, trimethylhexamethylene diisocyanate, isophorone diisocyanate, cyclohexyl diisocyanate.

32 (Previously Presented) The dye-sensitized solar cell of claim 11 wherein compound A is selected from the group consisting of:

tolylene diisocyanate; isophorone diisocyanate; an addition product of polytetramethylene glycol and tolylene diisocyanate; trimethylolpropane-denatured tolylene diisocyanate; an addition product of tolylene diisocyanate and a trifunctional ethylene oxide/propylene oxide copolymer that is obtained using glycerin as a starting material; an addition product of tolylene diisocyanate and a tetrafunctional ethylene oxide/butylene oxide copolymer obtained using diglycerin as a starting material; and an addition product of tolylene diisocyanate and six-functional ethylene oxide/propylene oxide copolymer obtained using sorbitol as a starting material.

33. (Previously Presented) The dye-sensitized solar cell of claim 11 wherein compound A is selected from the group consisting of:

tolylene diisocyanate; isophorone diisocyanate; an addition product of polytetramethylene glycol and tolylene diisocyanate; an addition product of polycarbonatediol and tolylene diisocyanate; trimethylolpropane-denatured tolylene diisocyanate; and an addition product of hexamethylene diisocyanate and bifunctional ethylene oxide/propylene oxide copolymer derived from ethylene glycol as a starting material.

34. (Previously Presented) The dye-sensitized solar cell of claim 11 wherein compound B is selected from the group consisting of: ethylene diamine, tolylene diamine, diphenylmethane diamine, and diethylene triamine.

35. (Currently Amended) The dye-sensitized solar cell of claim 11 wherein compound B is selected from the group consisting of: diethyltoluenediamine, dimethylthiotoluenediamine, and a trifunctional ~~tetrafunctional~~ polyetheramine.

36. (Previously Presented) The dye-sensitized solar cell of claim 18 wherein compound C is selected from the group consisting of: difunctional ethylene oxide/propylene oxide copolymer obtained using glycerin as a starting material, trifunctional ethylene oxide/propylene oxide copolymer obtained using ethylene glycol as a starting material, polyether-modified polycarbonate diol, and polyethyleneglycol.